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IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1977

AVANT INCORPORATED,

Petitioner,

v.

POLAROID CORPORATION,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIRST CIRCUIT

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RELIEF SOUGHT

Petitioners pray that a writ of certiorari issue to review the judgment and opinion of the United States Court of Appeals for the First Circuit entered in this action on March 21, 1978 (No. 77-1349).

OPINIONS BELOW

The opinion of the District Court dated June 8, 1977, is reported at 441 F. Supp. 898, and appears in Appendix A. A notice of appeal to the United States Court of Appeals for the First Circuit was docketed August 3, 1977. The opinion of the Court of Appeals dated March 21, 1978, affirming the opinion of the District Court is attached as Appendix B (—F.2d—).

JURISDICTION

The final judgment of the Court of Appeals was entered on March 21, 1978. The jurisdiction of this Court is invoked pursuant to 28 U.S.C., Section 1254(1). The jurisdiction of the District Court is invoked pursuant to 28 U.S.C., Section 1338.

QUESTIONS PRESENTED

1. DEPRIVATION OF FAIR TRIAL

Was Petitioner deprived of due process by the refusal of the Court of Appeals to grant a new trial in view of Rule 1 of the Federal Rules of Civil Procedure requiring proceedings in the District Courts to be conducted to secure the "just, speedy, and inexpensive determination of any action" where:

a. the District Court handed down an opinion one year after an abbreviated trial of less than two days so that Petitioner lost the benefits of a trial;

b. substantial portions of the trial record most favorable to Petitioner were missing from the court records;

c. the trial judge stated in open court (unrecorded) during the trial before the first recess that he was leaning toward Respondent?

2. NEW REQUIREMENT OF TOLERANCES (E.G. ENGINEERING DETAILS) IN PATENTS

Has the Court of Appeals for the First Circuit acted inconsistently with other Circuits by requiring a patent to fully teach all engineering details required to produce a finished commercial product, rather than to teach skilled workers in the art how to

produce the product, taking into account their extensive knowledge of the art; and has the First Circuit virtually nullified all patents subject to litigation in the First Circuit, including those of Respondent, that omit engineering details?

3. IMPROPER REQUIREMENT OF SUBJECTIVE CRITERIA

Has the Court of Appeals for the First Circuit acted inconsistently with other Circuits in requiring a patent owner to show that persons skilled in the art, competing with the patent owner, would have thought, i.e., using prior subjectivity, that a key feature of the invention would not have produced a proven beneficial result, where such persons never adopted the key feature, with the prior art under their very nose for years, until they copied it from the patent owner?

4. IMPROPER CONVERSION OF A PROCESS INTO A PRODUCT

Have the Courts below ignored Title 35 U.S.C. 101 in equating a process with a product, notwithstanding the specific statutory provisions that provide for process inventions which are separate from product inventions?

5. ELIMINATION OF SYNERGISTIC CONGRUENCY

Has the Court of Appeals deprived the Petitioner of due process by

insisting that the invention does not display synergy and simultaneously refusing to accept the specific congruency requirement of the patent that makes the synergy possible?

6. SIMPLICITY SHOWS NON-OBVIOUSNESS WHERE THERE IS LONG-FELT NEED

Has the Court of Appeals erred in finding no significance in the alleged simplicity of the invention in view of the long-felt need for the invention, which in the case of a simple invention would have resulted in almost its immediate discovery if it were, in fact, obvious?

7. CRUCIAL AND CLEARLY ERRONEOUS FACT FINDING BY THE COURT OF APPEALS

Has the Court of Appeals deprived Petitioner of due process by making the completely unsupported and erroneous finding of fact that the invention could not be practiced without equipment that was not developed until after the invention when it was demonstrated at trial that the invention could be practiced with the earliest prior equipment? Has the Court of Appeals further deprived Petitioner of due process by relying on the unsupported and clearly erroneous finding to show that the invention is not patentable?

8. FAILURE TO GRASP TECHNICAL SUBJECT MATTER

Have the Courts below failed, despite the alleged simplicity of the invention, to grasp the technical subject matter in suit in view of their reliance on a reference (Dunn) that is technologically alien to the invention, the making of unsupported finding of fact (Cf. Question 6) by the Court of Appeals and by numerous references to molding (18 instances) when the invention is the very opposite of molding?

9. DEPRIVATION OF CRUCIAL EVIDENCE

Has the Petitioner been deprived of crucial evidence or witnesses in the District Court in view of the limitation of the trial to a period of less than two days?

10. RELIANCE ON A SECRET PATENT REFERENCE

Has Petitioner been deprived of due process by the ruling of the Courts below that the invention is obvious in view of a patent reference (Dunn) that was not public knowledge at the time the invention was made?

11. DEPRIVATION OF FAIR PROCEDURE

Has Petitioner been deprived of due process by the refusal of the Courts below to consider crucial

Rule 36 Admissions that were made by Respondent solely because of Petitioner's failure to move them into evidence during the last phase of the trial where Petitioner was seeking to expedite the litigation, as the time deadline of the trial judge approached, by agreeing that the parties could designate deposition testimony in lieu of having it read into the Record, and thus assuming that the same condition would apply to the Rule 36 Admissions?

BRIEF STATEMENT OF THE CASE

Petitioner Avant Incorporated (Avant) brought an action under 28 U.S.C. 1338 against Polaroid Corporation (Polaroid) alleging infringement of the United States Letters Patent No. 3,679,512, issued July 25, 1972, to plaintiff as the assignee of the patentee.

The patent in suit describes a process or method for fabricating a laminated data card. The District Court in an opinion dated June 8, 1977, held that the patent in suit was invalid under 35 U.S.C. 103 in view of a patent to Dunn, which was not a matter of public knowledge at the time the invention was made, and a prior use of plastic envelopes having non-congruent edges, i.e., not "superposable so as to be coincident throughout."*

While extensive objective evidence was introduced to support plaintiff's position that the patent was not obvious to the ordinary worker in the art, this evidence was ignored by the District Court. For example, plaintiff demonstrated that the very users of the prior art non-congruent plastic envelopes experienced a long-felt need for the invention and yet with the prior

* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY, 1961

art under their very nose for years, missed the invention, including Respondent's key witness.

After plaintiff introduced the invention into the marketplace, the invention was copied by the very same users of the prior art, who then extolled the benefit of invention. Shortly thereafter, Polaroid Corporation, along with many others in the industry, also copied the invention from plaintiff.

Both the District Court and the Court of Appeals held that there was commercial success, but that plaintiff was not entitled to the benefits which flowed from the invention because the patent did not teach sufficient engineering details to produce a perfect commercial product. One such detail relates to tolerances, with the District Court stating on Page 11 of its opinion that "The patent in suit does not specify tolerances relating to congruency..." and the Court of Appeals stating on Page 6 of its opinion that the patent does not "...spell out the degree of congruency--the tolerances--required...."*

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*To ask how "congruent" is "congruent" is like asking how "black" is "black."

REASONS FOR QUESTION #1
(DEPRIVATION OF FAIR TRIAL)

It is respectfully submitted that the actions of the District Court, condoned by the Court of Appeals, have adversely affected the substantial rights of Petitioner and deprived it of a fair trial.

An abbreviated trial was conducted on June 7 and 8, 1976, wherein Petitioner's president testified with respect to the operation of various devices in the prior art and with respect to the differences between the invention of the patent in suit and the prior art. A disinterested third party witness also testified as to the same subject matter and to the effect that the invention was unobvious to him. A witness for Respondent also testified during the abbreviated trial, and acknowledged by contrast with the invention, that the prior art samples were non-congruent.

The actual trial time was about 1-3/4 days, owing to the trial judge's hearing with respect to a motion in a criminal case. One year later, on June 8, 1977, the trial judge rendered his Opinion. This patent litigation involved the comprehension of detailed points of technology, which were presented to the Court in the form of exhibits and testimony. Additionally, because the parties were informed that the judge desired the trial to last no

more than two days, Petitioner, in this non-jury trial, was limited in the material it could present without coming in conflict with the desires of the judge to limit the trial to two days.

Under these circumstances, how can it be concluded that Petitioner received a fair trial since it is submitted that it would be virtually impossible for the trial judge (and a new judicial clerk) to remember the testimony, the creditability of the witnesses, and the details of the devices demonstrated in the courtroom a year before handing down his Opinion? Why constrain a trial to a limited two-day period if the Opinion cannot be rendered within a reasonable time thereafter? It is respectfully submitted that Petitioner should be entitled to a new trial before another judge on this ground alone, since it was, in effect, deprived of the benefits of a fair trial.

Furthermore, substantial portions of the trial record, most favorable to the Petitioner, were missing from the court records, which was discovered by Petitioner during compilation of the Appendix on appeal. These portions set forth the cross examination of Respondent's sole witness, and it is respectfully submitted that the absence of this part of the record deprived Petitioner of the benefits of a fair trial. This is particularly true since the one-year delay in rendering the opinion should require the judge to review the testimony.

Furthermore, the trial judge stated in open court before the first recess in the trial that he was "leaning toward Polaroid." This statement alone is at variance with the Federal Rules and the U.S. tradition of justice which require the appearance of even-handed impartiality.

REASONS FOR QUESTION #2
(NEW REQUIREMENT OF TOLERANCES
[E.G. ENGINEERING DETAILS] IN PATENTS)

It has been widely reported that innovation and research have substantially declined in the United States during the last several years. Competition from innovative countries, such as Germany and Japan, which, by contrast with the United States, have strong patent systems, has made severe economic inroads again the United States in both foreigh and domestic markets. The result is that this country has a serious trade deficit, which, for example, was 3.65 billion dollars in March, 1978, and 5.46 billion in February, 1978.

The United States patent system is mandated "To promote the progress of science and useful arts...."* To do so, it must stimulate capital investment in innovation and research. If the fruits of innovation and research are not protectable by the patent system, it becomes extremely difficult to raise capital.

Our society is severely penalized when invention is not stimulated "... by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries."* A patent is not a stilitifying monopoly but rather an invigorating competitive incentive to promote

*U.S. Constitution, Article I, Section 8, clause 8

progress as our Constitution rightly states.

Furthermore, the survival of small companies, such as Petitioner, is often based upon effective patent protection of its innovative products. Without such protection, a small business generally cannot survive in the face of tremendous marketing power. Indeed, Respondent's founder and chairman, Edwin Land, has acknowledged the role that patents have played in the success of his company. He stated at the Polaroid Corporation annual meeting in April, 1977: "The only thing that keeps us alive is our brilliance. The only way to protect our brilliance is our patents." The First Circuit has now jeopardized all patents by requiring that they include "tolerances."

A patent speaks to the skilled artisan and not to the layman, as plainly indicated by 35 U.S.C. 112, C. 950, Sec. 1, 66 Stat. 798 (Appendix D). The inventor is faced with filing his patent application as early as possible since the patent law often requires it. See 35 U.S.C. 102, C. 950, Sec. 1, 66 Stat. 797 (Appendix D). Early filing means that the patent issues much earlier so that others may build upon the concepts therein, which become disseminated widely to all, in sharp contrast with maintaining the matter a trade secret. Furthermore, even if it were possible to include extensive engineering details in a

patent application when filed, to do so would be a waste of time and resources because a patent is directed to those skilled in the art, in contrast with laymen in the art. The requirements for engineering details, such as tolerances, do not exist in any modern patent office, such as the German and Japanese patent offices, nor in any other country. Furthermore, millions of U.S. patents do not meet this novel criteria. The Court of Appeals below, in effect, held that the patent was fatally defective due to the lack therein of such engineering details, since it failed to distinguish between severe and miniscule oozing of adhesive in Petitioner's inventive product. The Petitioner concedes there was some slight oozing of adhesive from the edges of its early prototype embodiments of the invention, which is undesirable in a finished commercial product. As the record clearly shows, this slight drawback is of minor importance, and in fact, ironically, exists today in Respondent's products embodying the invention sold in the marketplace.

In summary, by requiring the inventor to set forth engineering details relating to the right combination of heat, materials, machine, and tolerances, which are unnecessary and not required by either the case law, the statutes, or the skilled artisan to whom the patent is directed, the Court of Appeals has established a criteria which in effect invalidates in the First Circuit most currently issued patents, including those of Respondent.

REASONS FOR QUESTION #3 (IMPROPER REQUIREMENT OF SUBJECTIVE CRITERIA)

The Court of Appeals has imposed a further unwarranted requirement on the United States patent system by requiring the patent owner to prove that workers in the art would not have thought that the invention would produce the beneficial results obtained by it. This Court in Graham v. John Deere Co. of Kansas City, 148 USPQ 459, 467, 474; 383 U.S. 1, 17, 26; 86 S. Ct. 684 (1966); directed the lower courts to examine objective (in contrast with subjective) evidence in connection with whether the invention, which produced the benefits, would be obvious to the ordinary worker in the art. These objective inquiries include the following "...commercial success, long-felt but unsolved need, failure of others..." (id at Page 17). Petitioner proved that there was a long-felt need for the invention; that workers in the field failed to recognize and adapt the invention with the prior invalidating art under their very nose, and after the invention was introduced into the marketplace by the Petitioner, that they thereafter copied it. In this case, the very users of the prior art, applied to invalidate the patent, felt the need to attain the benefits of the invention, and yet completely missed the invention, until it was introduced by the Petitioner, and the invention was thereafter copied by such users of the prior art, Polaroid Corporation, and the entire industry. Both the District Court and

the Court of Appeals erroneously swept these objective facts aside since the benefits proven by the Petitioner did not result in what the lower courts considered to be a finished commercial product. By its decision, the Court of Appeals holds that Petitioner must prove a subjective state of mind of persons skilled in the art: namely, that plaintiff did not prove that workers in the field would ever had thought that the key feature of the invention would not produce the above-stated benefits. See lines 1-4 of the second paragraph, Page 5, of the Opinion of the Court of Appeals reported in the F. Supp. Petitioner respectfully submits that this completely uncalled-for requirement creates an intolerable burden on the inventor.

In summary, in connection with Question #3, it is manifestly unjust for the Court of Appeals to ignore the objective criteria set forth by this Court in Graham, supra, and numerous other cases and to superimpose an additional novel subjective "state-of-mind" requirement for invention, which amounts to an intolerable burden on the inventor, and which is without basis in any patent stature or case law. Such a requirement is also contrary to 35 U.S.C. 103, C. 950, Sec. 1, 66 Stat. 798. In Graham, supra, this Court stated that 35 U.S.C. 103 was intended to abolish the (subjective) "flash of genius" test.

REASONS FOR QUESTION #4 (IMPROPER CONVERSION OF A PROCESS INTO A PRODUCT)

It is to be emphasized that the invention in suit relates to a method and not merely to a group of elements combined to form a product. Method inventions, as opposed to product inventions, are one of the classes specifically authorized by statute. 35 U.S.C. 101 specifically provides:

> "§ 101. Inventions patentable
>
> "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." (emphasis added)

Section 100(b) defines a "process" as including a "method" as follows:

> "§ 100. Definitions
>
> "When used in this title unless the context otherwise indicates--
>
> "(a) The term 'invention' means invention or discovery.
>
> "(b) The term 'process' means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter or material."

The method of the invention requires the face-to-face heat lamination of congruent sheets that are maintained in congruency by accurately positioned heat seals. The method includes the steps of widely separating the sheets and accurately positioning and gripping an insert against the seals.

The invention is thus in sharp contrast with the roll and platen methods of heat lamination in the prior art, where grossly oversized and imprecise pairs of elongated plastic rolls or sheets were laminated first and then laboriously trimmed or die-cut by the end user to produce a finished product to achieve congruency.

The invention achieves the reverse: Trimming first, and then heat lamination afterwards. Fabrication is rapid and easy.

Notwithstanding the specific requirements of 35 U.S.C. 101, the District Court treated the invention as a combination of elements. The Court of Appeals agreed (Page 3 of its Opinion) with the reasons developed in the Opinion below. It is to be noted that other Courts have recognized the basic distinction between a method on one hand, and a combination of elements on the other hand. Cf., Federal Sign & Signal Corp. v. Bangor Punta, Inc., 357F Fed. Supp. 1222, SDNY (1973).

REASONS FOR QUESTION #5 (ELIMINATION OF SYNERGISTIC CONGRUENCY)

The Court of Appeals noted (Page 5 of its Opinion) that in the case of the invention "congruency" was said to have produced a "surprising result" in that molten adhesive would not ooze, but for reasons not fully understood, stayed put. This statement sets forth only partially Petitioner's position. Petitioner acknowledged that in some situations, even with congruency, it would be possible to have an outflow, but it is readily removed, e.g., with a fingernail or by wear, so that a commercially acceptable product could be produced without the need for post-lamination trimming. This is by complete contrast with the non-congruent envelopes of the prior art in which the outflow of adhesive produced a comingling with untrimmed edges that required post-lamination trimming in order to achieve a commercially acceptable product.

The Court of Appeals concluded that there was nothing surprising about Petitioner's result because the patented envelopes will ooze unless the correct combinations of heat and materials are used. Yet, as noted above, the kind of ooze that results is readily eliminated. The surprising consequence of the congruency is that no post-lamination die-cutting or trimming was needed. The congruency requirement that makes this possible is fully set forth in the patent and was understood by ordinary

workers in the art, including those of Respondent. Yet in the face of the express language of the patent, the Court of Appeals said that when the Petitioner requires congruency it really doesn't mean it.

REASONS FOR QUESTION #6 (SIMPLICITY SHOWS NON-OBVIOUSNESS WHERE THERE IS LONG-FELT NEED)

The Court of Appeals conceded that the greatest inventions may be simple and then dismissed the significance of simplicity by concluding that many non-patentable devices are simple also.

In the case of the invention in suit, however, the alleged simplicity combined with need establishes non-obviousness. The invention provides something that has been needed by the art since the advent of the lamination of plastic sheets by heat and pressure in the early 1930's. Yet the invention was not made until the mid 1960's. It was demonstrated by Respondent at trial that the invention could be practiced on the platen press, i.e., of the type that dated back into the 1930's. If an invention is needed and it is simple, one must conclude that the invention would have been made in the 1930's instead of the 1960's if it had, in fact, been obvious.

REASONS FOR QUESTION #7 (CRUCIAL AND CLEARLY ERRONEOUS FACT FINDING BY THE COURT OF APPEALS)

As noted above in connection with the reasons for granting the petition with respect to Question #6, the invention could be practiced on the earliest equipment developed for heat lamination. Yet the Court of Appeals specifically found to the contrary (Page 4 of its Opinion) that the platen press was replaced by the "chip bonder" with the result that envelopes could then be laminated without distortion. The Court then concluded that once this development took place, "...invention was not required to finish off the pouch earlier rather than later" (Page 4 of its Opinion). Thus the Court of Appeals not only made a clearly erroneous and unwarranted finding of fact, it improperly used that erroneous and unwarranted finding of fact to hold that no invention was required to produce Petitioner's result.

In fact, during the depositions and trial, four distinctly different types of laminating machines were successfully used to practice the invention, conclusively demonstrating its independence of the latest type of machine, upon which the Court below based the following syllogism:

1. The invention requires a laminating machine.

2. The latest version of laminating machine successfully practiced the invention.

3. Therefore, the latest version of laminating machine is "...the linchpin of Avant's commercial success." (Page 6)

While it is true that the invention requires a laminating machine, it can be practiced in any, not just the latest, such machine. The invention became a success because it avoided the need for post-lamination trimming. The latest machine merely provides a better way of achieving the same result that also can be achieved using the earliest 1930's machines.

It is to be noted that the Court's erroneous insistence that the latest machine made the invention a success is completely at variance with its insistence that the invention would have been obvious in the light of the secret and non-analogous Dunn reference where the express purpose is to avoid the use of any machine.

REASONS FOR QUESTIONS #8
(FAILURE TO GRASP TECHNICAL SUBJECT MATTER)

Despite the express method language of Petitioner's claim, the Court of Appeals concluded that the invention is simply a convenient laminating envelope (Page 5), as did the District Court.

At the same time, the Court of Appeals throughout its Opinion referred to molding machines (Page 3), molding processes (Pages 3, 4, 6), molding art (Page 4, two instances; Page 5), molding technique (Pages 4, 5), and molding or mold in general (Page 2, Page 4, three instances; Page 5, four instances; Page 6) for a total of 18 references in six pages. Molding has nothing whatsoever to do with lamination and the invention and, in fact, is the opposite of lamination. Molding involves "a cavity in which a substance is shaped" (WEBSTER'S SEVENTH NEW COLLEGIATE DICTIONARY, 1971). Laminating in accordance with the invention involves no use of a cavity but rather the bonding of material under heat and pressure.

In addition, the Court of Appeals and the District Court found a Dunn patent to be a pertinent reference. The invention, however, is in marked contrast with the persistently sticky, pressure-sensitive adhesive envelope of the Dunn patent which is intended to avoid the heat activation required for

the invention. It is well understood by those skilled in the art that pressure-sensitive adhesives and heat-activatable adhesives pose entirely different problems.

It is also to be noted that the Dunn reference was in a cross-reference class that was listed by the examiner in his search notes, but was not cited because its technology is so alien to the technological problems involved in face-to-face heat lamination.

REASONS FOR QUESTION #9
(DEPRIVATION OF CRUCIAL EVIDENCE)

Since the District Court limited Petitioner to a trial period of less than two days, Petitioner was unable to introduce, for example, the testimony of Dunn (upon whose patent the Courts' Opinions rely). He would have testified that his invention involves a technology which is not properly combinable with the prior art bag pouches and that it would not have been obvious to him to make such a combination. Petitioner was also deprived of an opportunity to introduce other testimony as to the non-obviousness of the invention.

REASONS FOR QUESTION #10
(RELIANCE ON A SECRET PATENT REFERENCE)

35 U.S.C. 103 must be construed in a manner to uphold its constitutionality and preserve the rights of the inventor (U.S. Constitution, Article 1, Section 8, clause 8). While the Court has previously interpreted the statute* as permitting the combination of a reference (Dunn) that was not publicly known at the time the invention was made with one or more other references, such a construction is contrary to the mandate of the Constitution because it does not secure to the inventor the exclusive right to his discovery. Instead, it permits the rights of the inventor to be defeated on the artificial basis of constructive notice of a reference that was maintained in secrecy in the U.S. Patent Office until many years after the invention.

This is unlike the situation under 35 U.S.C. 102, where a prior anticipatory reference can validly bar a subsequent application on the identical subject matter. In this case the trial court specifically found that 35 U.S.C. 102 does not apply.

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*Hazeltine Research v. Brenner, 382 U.S. 252 (1965)

REASONS FOR QUESTION #11
(DEPRIVATION OF FAIR PROCEDURE)

In its Rule 36 Admissions, Respondent made admissions that are believed to clearly demonstrate the non-obviousness and significance of the invention, as well as demonstrate the blatant copying of the invention by Respondent after it had groped for years and failed to find a satisfactory solution on its own.

These Admissions were excluded because Petitioner did not place them in evidence before it rested at the end of an "expedited" two-day trial.

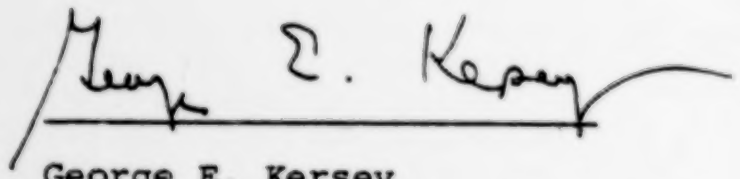
As stated in Moore's Federal Rules Pamphlet, 1975, on Page 730:

> "The new provisions give an admission a conclusively binding effect, for purposes only of the pending action, unless the admission is withdrawn or amended. In form and substance a Rule 36 admission is comparable to an admission in pleadings or a stipulation drafted by counsel for use at trial, rather than to an evidentiary admission of a party. Louisell, Modern California Discovers § 8.07 (1963); 2A Barron & Holtzoff, Federal Practice and Procedure § 838 (Wright ed. 1961). Unless the party securing an admission can depend on its binding effects, he cannot safely avoid the

> expense of preparing to prove the very matters on which he has secured the admission, and the purpose of the rule is defeated. Field & McKusick, Maine Civil Practice § 36.4 (1959); Finman, supra, 71 Yale L.J. 371, 418-426; Comment, 56 Nw. U.L. Rev. 679, 682-683 (1961)."

It is to be emphasized that under the particular circumstances of the trial in Petitioner's case, with emphasis on concluding the proceedings in an abbreviated two-day period, with agreement that the Parties could designate deposition testimony in lieu of having it read into the Record, Petitioner assumed that the Rule 36 Admissions could also be designated. Their exclusion in the face of these circumstances is inconsistent with "substantial justice" and constitutes "Harmless Error" under Rule 61 of the Federal Rules of Civil Procedure (Appendix E).

Respectfully submitted,



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APPENDIX A

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

AVANT INCORPORATED

v.

CIVIL ACTION
NO. 72-3892-F

POLAROID CORPORATION

OPINION

June 8, 1977

FREEDMAN, D.J.

Pursuant to an Order of this Court dated March 29, 1976, this matter was tried without a jury on June 7 and 8, 1976, on the limited issue of validity of the patent involved herein. The parties thereafter filed extensive briefs and proposed findings of fact and conclusions of law. After careful consideration of the evidence and pertinent authorities, the Court hereinafter sets forth its findings in accordance with Rule 52(a) of the Federal Rules of Civil Procedure.

This is an action brought under 28 U.S.C. § 1338 by Avant Incorporated (Avant) against Polaroid Corporation (Polaroid) alleging infringement of

United States Letters Patent No. 3,679,512 (the '512 patent),[1] issued July 25, 1972 to plaintiff as the assignee of the patentee Frederick W. Macone.

Avant is a corporation existing under the laws of the Commonwealth of Massachusetts. Defendant Polaroid is a Delaware corporation having its principal corporate offices and a regular and established place of business in the Commonwealth of Massachusetts.

Polaroid denies that it has infringed the '512 patent and counterclaims, inter alia, for a declaratory judgment that the '512 patent is invalid, under 35 U.S.C. § 102, because of anticipation of prior use, knowledge, patenting, and sale; under 35 U.S.C. § 103, because of the obviousness of the '512 invention to a skilled mechanic presumed to know the prior art; and, under 35 U.S.C. § 112, for failing distinctly to claim and adequately to describe the subject matter of the '512 patent.

The patent in suit describes a method for fabricating a laminated data card. Essentially, the method involves two outer plastic sheets which are joined by elongated spot welds. These

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[1]The '512 patent has been reproduced in Appendix B to this opinion.

"welds or seals couple and maintain the outer sheets in a congruent relationship," and at the same time "act as nests to receive and properly orient the inner data card which may be inserted in a second or so." The essence of the claimed invention, therefore, is found in the features of the envelope which is created by the joining together of the two plastic sheets, and which is to be used in a manner to take advantage of its features. More specifically, as enumerated in Claim 1 of the '512 patent, the "coupling means" of the envelope maintain the outer sheets in a congruent face-to-face relationship with each other, permit wide separation of the coupled sheets, and are positioned with respect to the edges of the coupled sheets so as to permit proper location of an edge of a data-bearing sheet which has been inserted between the coupled sheets and abutted against the coupling means. Claim 1 further specifies that the method enables a data-bearing card to be inserted easily and rapidly between the outer sheets and, once inserted, to be gripped thereby, before the sheets and the data-bearing sheet are laminated together by the application of heat. Claim 2 of the patent in suit specifies that the coupling means is formed by heat sealing the outer plastic sheets together at widely separable portions so as to provide for accurate alignment of the edges of a data-bearing sheet in relation to the coupled outer sheets.

It is evident from a reading of

the '512 patent that it does not claim or teach the use of the claimed method described above in relation to particular bonding machines, laminating materials, or variables of temperature, period of heat application, or pressure. Thus, in its determination of the validity of the patent, this Court is restricted to a consideration of the character of the envelope and the method of fabricating the laminated data card as described in the patent itself.

In order to save time at trial, the Court ordered that, following trial, the parties submit (1) any objections they might have to placing in evidence exhibits that had not been so admitted during trial, and (2) designations and counter-designations of deposition testimony to be included in the record of the case. In their efforts to comply with the Court's wishes, the parties filed, among other things, such objections and designations as were requested and, in doing so, also partook in a protracted written argument as to the propriety of each other's submissions. Because these objections and designations go directly to what the Court is to consider in its determination of the issues in this case, it is appropriate to deal with them now.

The Court admits as part of the record all the portions of deposition testimony that both plaintiff and defendant designated to the Court following trial. This includes all portions designated by Avant in its filing with this Court dated July 7, 1976, and all

those designated by Polaroid in its filings dated June 17, 1976, and July 23, 1976.

The Court has considered all the exhibits presented at the time of trial, and the objections, if any, to their being admitted into evidence. The determination as to each of them is expressed in Appendix A to this opinion.

In addition to filing the above-mentioned objections and designations, Avant submitted to the Court designations for the record of various stipulations it claimed had been entered into with Polaroid prior to trial and designations of Rule 36 admissions that it claimed have been made by defendant. It is the Court's feeling that at the conclusion of the trial concerned herein, both sides rested their case, subject only to the submission of the objections, designations, and counter-designations already discussed. Had Avant wished to place into evidence such stipulations and admissions, it should have done so during the presentation of its case before it rested. Those designations are therefore disallowed.[2]

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[2] Because the stipulations and Rule 36 Admissions which Avant submitted have been excluded from the record, the Court does not reach a decision as to their validity. I would comment, however, that Polaroid raises serious question as to whether the pretrial

(continued on page 33)

The Patent Act of 1952 specifically sets forth the conditions of patentability in three sections. Codified as sections 101, 102, and 103 of Title 35, they make it clear that patentability is dependent upon three conditions: novelty, utility, and non-obviousness. Because of the nature of the language of sections 102 and 103, both involved in the instant case, a defense based upon section 103 is broader than one which relies upon section 102, it would seem appropriate to begin with a discussion of section 103.

35 U.S.C. § 103 provides:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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stipulations Avant wished to designate were actually agreed upon and whether all the requests for admissions could be deemed admitted under the given circumstances.

As stated by the Supreme Court in Graham v. John Deere Co. of Kansas City, 383 U.S. 1 (1966),

> [w]hile the ultimate question of patent validity is one of law, A. & P. Tea Co. v. Supermarket Corp. [340 U.S. 147] at 155, the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

Id. at 17. Thus, as made clear by the above language, in a determination of patentability of the invention involved in the present case, as regards section 103, the background of that invention and the prior art in the field of data card lamination must be considered.

In the field of data card lamination, three general types of devices have served as providers of heat in the bonding process: the platen press, the roll laminator, and the chip bonder. Although the '512 patent does not concern or specifically refer to any particular type of laminator, an overview of the above devices is helpful in

understanding a discussion of the types of bonding systems and envelopes that were used in the laminating field prior to the issuance of that patent. The platen press, as described at trial by Roger J. Kuhns, president of Avant, came into being around 1930. It consisted of two parallel plates which were heated and which laminated a sandwich of two sheets of thermal setting plastic and an insert by a process of heat, fusion, and cooling while under pressure. The roll laminator was apparently introduced into the trade in the mid-1950's and, according to Kuhns, proved to be more successful than the platen press because of its relative speed in laminating. This newer type of laminator also employed heat in its laminating process, but, unlike the platen press, made use of continuous rolls of plastic that were fed through the device and could at appropriate times have inserts placed between them so that, following the heating process, the type of sandwich already discussed was produced. The chip bonder, the most recent device of the three, came into use in the mid-1960's. This type of laminator was designed to receive an insert and an envelope of predetermined size (a "chip"). It achieved commercial success, due primarily to its speed in bonding relative to the earlier types of machines.

As briefly described above, in platen lamination, a data card is inserted between oversized sheets of plastic and heated in the press. Early

platen laminations were produced by the use of separate sheets of plastic. The platen method was effective in producing laminated cards, but was not without its problems. Besides being slow and cumbersome, the original method of using separate outer sheets could lead to operator error, since opposite faces of those sheets were heat sensitive adhesive and non-adhesive. If placed into the press so that the adhesive face was improperly facing away from instead of toward the insert being laminated, the finished product was not successfully laminated and the press was subjected to the messy excess flow of adhesive material. To avoid this type of error, the outer plastic sheets were eventually tacked together so that the sides with the heat sensitive adhesives always faced the proper direction. The result was a bag-like pouch into which an insert was placed prior to lamination.[3]

Although these bag pouches apparently eliminated the operator error associated with the use of separate outer sheets, the platen method remained slow and the cards laminated in the platen press, depending upon their desired size and intended use, often needed to be trimmed of excess plastic.

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[3]Whether there was any significance to such tack welds other than to prevent such operator error in placement of the sheets is a matter with which the parties are in disagreement. That issue will be discussed later.

Because the roll lamination method proved to be faster, the platen press became for the most part obsolete and was largely superseded by the roll laminator around 1960. Nevertheless, the latter type of machine, while faster than the platen press, had disadvantages common to the platen method - waste of plastic material and the frequent need for post-lamination trimming.

Another approach to data card lamination was taken in a 1964 patent application filed by Donald N. Decof. As taught by the Decof patent, U.S. Patent No. 3,388,661, a pouch of predetermined size was made with three sides closed and one side (the minor dimension edge) open. Face-to-face heat lamination was not employed. Rather, after a data card had been inserted, the fourth side of the pouch was sealed and embossed with a distinctive raised pattern which would usually identify the organization using the identification card. Thus the card, not bonded to the pouch itself, "floated" within. Briefly, the Decof patent claimed a card receptacle as described above in which the sealed area defined a pocket utilized to position an identification sheet and which served as a tamperproof, counterfeit deterrent identification device.

It was in the mid-1960's that the patent in suit was conceived and eventually reduced to practice. According to Avant, the '512 patent was the

result of its efforts to create a method for producing laminated data cards that would provide security, minimize waste of plastic, reduce labor time, and eliminate costs of post lamination trimming devices.

About the same time that Avant conceived and put into practice the envelope which was the subject of the '512 patent, Polaroid began to produce an envelope named the Polapouch. That pouch had a construction similar to that of the Decof pouch. As in the method taught by the Decof pouch, a data card was placed in the Polapouch, and then a fourth edge was sealed, leaving the insert to float within. Several years later, about 1969, Polaroid produced another type of laminate envelope referred to as a dual bond. The dual bond laminate made use of pressure sensitive adhesive and was the subject of a patent filed by Robert A. McVoy and Ronald R. O'Connor in 1972 (U.S. Patent No. 3,827,726) and apparently fashioned after the teachings of a patent filed by Lyman D. Dunn in 1966 (U.S. Patent No. 3,505,140). The significance of the Dunn patent to this case will be discussed later.[4]

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[4] Because the Dunn patent is referred to a number of times in this opinion, it has been reproduced in Appendix B following a reproduction of the patent in suit.

It was in the early 1970's that Polaroid began to produce the types of laminate envelopes that are the two accused structures in this case: the Polaseal envelope, introduced about 1971, and the Polapress envelope. The latter was the subject of U.S. Patent No. 3,495,501 filed in 1973 by Paul A. Andrews and Richard M. Raia and assigned by them to Polaroid.

The starting point in consideration of any challenge to the validity of a patent is the language found in 35 U.S.C. § 282. That section, at the time of commencement of this suit, provided that "[a] patent shall be presumed valid. The burden of establishing invalidity of a patent shall rest on a party asserting it." Although the above presumption does exist it is clear from the case law that it is by no means conclusive and can be overcome by the party asserting the invalidity. See, e.g., Westinghouse Electric & Manufacturing Co. v. Formica Insulation Co., 266 U.S. 342 348 (1924). To go one step further, it has been settled in this circuit that "[t]he presumption, at least where a combination patent claim is involved, is not a heavy one to begin with." Futorian Manufacturing Corp. v. Dual Manufacturing & Engineering, Inc., 528 F.2d 941, 943 (1st Cir. 1976); Lawrence Rigging, Inc. v. Airtek Corp., 182 USPQ 375 (D. Mass. 1974). I believe that the patent alleged in this case to have been infringed is such a combination patent. Based on

the reasoning set forth in the pertinent cases, and from a review of the evidence in this case, I find that the presumption of validity of the '512 patent is dissipated.

Looking specifically to the patent in suit, it is apparent from the record that Avant contends that that patent was not anticipated in the prior art by virtue of the fact that it claims certain distinctive elements. Those elements essentially are as follows:

(1) congruent outer plastic sheets;

(2) maintenance of congruency, which is attained by accurately positioned heat seals (coupling means);

(3) ability of the outer sheets to be widely separate ("butterflying");

(4) accurate initial registration (alignment) of an insert by positioning it against the coupling means;

(5) snapping back of outer sheets after insertion to grip the insert and prevent slipping (maintain alignment) prior to lamination;

(6) heat activated face-to-face lamination; and

(7) elimination of post-lamination trimming.

I find that the '512 patent is invalid under 35 U.S.C. § 103 because the subject matter of that patent when taken as a whole was obvious at the time the invention was made to a person having ordinary skill in the art to which that subject matter pertains. As I will elaborate below, I feel that the subject of the '512 patent is but a combination of elements found in the prior art. Although a patent which brings together such elements may be valid, to be so it must represent a synergy, resulting from their union. Thus, as the established test for combination patents states, "[t]he conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable." Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 152 (1950). See Forbro Design Corp. v. Raytheon Co., 390 F. Supp. 794, 801 (D. Mass. 1975), aff'd, 532 F.2d 758 (1st Cir. 1976). A review of the '512 patent, the prior art, and the evidence before this Court leads me to conclude that each of the elements claimed in the patent in suit was present in the prior art either independently or in combination and that their use in that patent have created nothing so new or unusual that it could be patentable. To avoid uncertainty as to how this conclusion is reached, each

of those elements should be dealt with individually.

It is plain from a reading of the '512 patent that it claims the use of congruent outer plastic sheets, those sheets being held together by the coupling means (heat seals or welds). The use of the phrase "congruent face-to-face relationship" in Claim 1 of the patent is taken by this Court to mean that the outer edges of the plastic sheets coincide. The patent does not, however, place any significance on congruency. From testimony presented at trial, it appears as if Avant's assertion is that congruence of the plastic sheets relates to the advantage of avoiding post-lamination trimming of die cutting. Such a relationship is nonetheless not expressed in the '512 patent. In addition, I would agree with Polaroid in its argument that avoidance of post-lamination die cutting is not the necessary and inevitable result of congruency. The significance of the congruent relationship is also left unclear when it is realized that the patent in suit does not specify tolerances relating to congruency that would be allowable in the practicing of the patent. It would seem that such tolerances would be necessary in production of the types of envelopes that are the subject of the patent in suit. In any event, the Court can find in the '512 patent no significance attached to congruency other than its possible relationship to elimination of post-lamination die

cutting, which will be dealt with in more detail later in the Court's findings. Furthermore, I do not find that congruency, in and of itself, is an element unique to the method taught in the '512 patent. An examination of envelopes or pouches used with the platen press, as well as other types of envelopes in the prior art which have been presented as exhibits in this case, reveals outer sheets held together in relationships that, taking reasonable tolerances into account, can be considered congruent.

The use of heat seals or welds as a coupling means for holding together plastic sheets prior to lamination is certainly nothing new in the prior art. Indeed, there is no question that this type of coupling means was employed in the fabrication of the early platen pouches. Avant, however, argues not only that the positioning of the coupling means in the prior art was not as precise as in the envelope which is the subject of the '512 patent, but also that a significant use of these welds as taught in the '512 patent was previously unanticipated. What Avant alludes to is the use of the seals as an abutment against which an insert can be placed so as to achieve accurate initial registration prior to lamination. A reading of the Dunn prior art patent, however, indicates that the above elements of the '512 patent were indeed already present in the prior

art.[5] Dunn teaches use of adhesive sheets that "may have a small portion which adheres to each other . . . to provide a hinge means or a means normally holding the two sheets . . . directly together." That patent goes on to specify that "the line of adhesion provides an edge . . . against which the card or sheet-like article to be laminated may be initially abutted, if desired, to facilitate initial registration thereof." It could be argued that the envelope in Dunn differs from that taught by the '512 patent in that the coupling means used in Dunn is an adhesive rather than heat seals or welds, and is a continuous edge rather than a number of tackings. Nevertheless, the important fact is that Dunn teaches the use of a hinge or coupling means along one of the four edges of an envelope against which an insert can be accurately aligned.[6]

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[5]The Dunn patent application was filed April 20, 1966, and is dated April 7, 1970. The '512 patent application was filed April 19, 1967, and is dated July 25, 1972.

[6]An examination of the diagrams found in the Dunn patent also appears to indicate a congruent relationship between the outer sheets, as well as the ability of those sheets to be widely separated to receive an insert.

Many of the elements which Avant asserts are unique to the '512 patent are in fact present in the types of envelopes, or half pouches, used with the platen presses prior to the filing of the patent in suit. Such a half pouch, as exemplified by exhibit P2N, is an envelope of essentially congruent plastic sheets which have been joined along one of four edges by heat seals. These outer sheets may, as in the case of the type of envelope taught by the '512 patent, be widely opened ("butterflied") so that an insert may be placed between them. Such an insert can be abutted against the seals for initial registration prior to lamination. That such a practice was done on occasion in the past is reflected by the record in this case. Avant points out that the operating instructions for a platen press placed in evidence at trial as exhibit P2 instruct the user to locate centrally any insert within the plastic sheets, thus implying that such an insert should be kept-away from the seals. However, although the seals in the platen pouches may not always have been as precisely produced as those found in the '512 patent envelopes are asserted to be, and may not have been originally intended as something against which to abut an insert, one cannot ignore the fact that the practice of using the seals as an abutment was not unknown or unpracticed. In addition, as inspection of platen pouches introduced as exhibits at trial will reveal, once an insert has been placed against the seals, the outer sheets close in a manner sufficient to

grip the insert. A final characteristic of the platen envelope is that, following lamination, it can be left untrimmed, depending upon its intended use. Granted, such pouches were in the past often trimmed or die cut. But the avoidance of this post-lamination process is something not unknown to users of the platen press. The record reveals not only that there were situations in which a post-lamination platen pouch would go untrimmed, but also that it was not an uncommon practice for pouches to be pre-cut in halves or quarters to facilitate the lamination of cards of varying dimensions.

Nowhere does the '512 patent either claim or refer to the elimination of post-lamination trimming or die cutting. Although Avant apparently is arguing that the elimination of such procedures is inherent in the '512 patent, I do not find that that is the result that necessarily would follow from practicing the patent's method. In any event, this Court does not feel that the avoidance of post-lamination cutting or trimming was unknown in the prior art. As has already been mentioned, envelopes used with the platen press were at times left untrimmed or die cut after lamination, depending upon intended use or the whim of the individual for whom the laminate was produced.

Regarding the avoidance of post-lamination trimming or cutting in the prior art, I would also refer once again to the Dunn patent. The drawings found

in that patent clearly depict an envelope of predetermined dimensions. A reading of Dunn reveals passages which certainly suggest the fabrication of an envelope which avoids post-lamination trimming or cutting. At one point Dunn states that "[p]eripheral positions of the finished lamination assembly may be trimmed by individual user," suggesting that the finished product need only be cut or trimmed to make it more suitable to the user's liking. More specifically, it can be argued that Dunn teaches pre-lamination cutting by the fact that it provides the following:

> The lamination unit of this invention may be made in several sizes so as to fit small card-like articles, large stationery-size articles, or several other sheet sizes. Therefore, unlike the case with laminating mechanisms, the size of the sheet which may be laminated is relatively unlimited, merely based upon the sizes in which the units are made.

Thus, as reflected in the above discussion, this Court is of the opinion that the elements asserted to be unique to the '512 patent can be found in the prior art, merely by examining the Dunn patent and the pouches used with the platen press. I cannot say after consideration of the entire record that those elements have been used in the '512 patent in a new or unusual manner. I find that because the subject matter of the '512 patent was obvious to those

skilled in the art when the patent was originally filed, the patent in suit herein is invalid under 35 U.S.C. § 103.

Polaroid also argues that the patent in suit is invalid under subsections (a), (b), (e), and (g) of section 102. Thus, that section reads in pertinent part:

> A person shall be entitled to a patent unless--
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> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use of on sale in this country, more than one year prior to the date of the application for patent in the United States, or
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> * * *
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or
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> * * *
>
> (g) before the applicant's invention thereof the invention was

made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

I cannot agree with Polaroid in its argument as to section 102. While the elements of the '512 patent were already present in the art, I do not feel they are all sufficiently embodied by any single prior patent or structure, including the Dunn patent and the platen pouches. The '512 patent cannot therefore be invalidated under section 102.

Finally, Polaroid argues that the '512 patent is invalid under 35 U.S.C. §112 in that it fails distinctly to claim and adequately to describe its subject matter. I find no merit in this assertion. The '512 patent sufficiently meets the requirements set forth in section 112.

In view of the foregoing opinion that the patent in suit is invalid under 35 U.S.C. § 103, judgment is to be entered for the defendant on the claim of infringement.

(Signed Frank H. Freedman)
United States District Judge

(APPENDIXES OMITTED)

APPENDIX B

United States Court of Appeals
For the First Circuit

No. 77-1349

AVANT INCORPORATED,
PLAINTIFF, APPELLANT,
v.
POLAROID CORPORATION,
DEFENDANT, APPELLEE.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
[HON. FRANK H. FREEDMAN, *U.S. District Judge*]
[441 F. Supp. 898]

Before
CAMPBELL and BOWNES, *Circuit Judges*,
GORDON, *District Judge.**

George E. Kersey for appellant.
David L. Foster, with whom *Frederick L. McKnight*, *Wilkie, Farr & Gallagher*, and *Goodwin, Procter & Hoar* were on brief, for appellee.

March 21, 1978

CAMPBELL, *Circuit Judge*. Avant Incorporated sued Polaroid Corporation for infringement of patent No. 3,679,512 (the '512 patent) issued to Avant as assignee of the inventor. The patent disclosed an allegedly novel plastic envelope which, after the insertion of a data card, is to be subjected to heat and pressure in order to produce a laminated data card. The district court found for Polaroid on the latter's counterclaim which asserted that the patent was

* Of the Eastern District of Wisconsin, sitting by designation

invalid for obviousness under 35 U.S.C. § 103. *Avant Inc.* v. *Polaroid Corp.*, 441 F. Supp. 898 (D. Mass. 1977). Avant appeals.

The patented envelope is composed of two plastic sheets joined by elongated spot welds or heat seals. In the words of the application, these "welds or seals couple and maintain the outer sheets in a congruent relationship," and at the same time "act as nests to receive and properly orient the inner data card which may be inserted in a second or so."[1] The outer sheets of clear plastic thus form a sandwich which, upon insertion of the card to be laminated and application of correct amounts of heat and pressure, fuse so as to produce a laminated card.[2]

[1] Claim 1 of the patent is framed as "a method of producing a laminated data card having a plurality of edges," the steps in which comprise, first of all, providing an envelope having a coupling means for maintaining the outer sheets in a "congruent face-to-face relationship with each other." The coupling means is to be positioned so as to permit "wide separation" of the sheets, and to permit proper location of an edge of the insert abutting the coupling means. Claim 1 goes on to state that the claimed method separates the outer sheets along at least two outer edges to permit a data sheet "to be easily and rapidly inserted between said outer sheets and gripped thereby." The patented method is said further to comprise the steps of "inserting an inner data bearing sheet between said outer sheets and against said coupling means for accurately positioning an edge of said data-bearing sheet with respect to said outer sheets," and, finally, to laminate the outer sheets and inner data bearing sheet "by the application of heat thereto." Claim 2 is of the "method of claim 1 wherein said coupling means is formed by heat sealing said first and second outer sheets together at widely separated positions of said outer sheets to provide for accurate alignment of the edges of said inner data bearing sheet."

The emphasis throughout the patent is upon the ability of the described envelope to receive and maintain the data card in the correct position, without shifting. There is no hint that the invention teaches a lamination method eliminating post-molding ooze or wavy edges.

[2] Fusion is accomplished by the melting of the inner side of each plastic sheet. The outer portion is designed to withstand the heat. The patent does not describe the composition or chemistry of the two plastic sheets; lamination by heat utilizing these principles was well known prior to the patent.

It is important to note, as did the district court, that while the envelope must be used in conjunction with a machine capable of providing the requisite heat and pressure, and while successful lamination requires the plastic sheets to possess certain properties so as to fuse properly, the '512 patent does not claim or teach anything about molding machines, laminating materials, temperature variables, period of heat application, or pressure. The patent dwells upon the design of the envelope, emphasizing its ability to align and secure the data card and to avoid disturbing the moist surface of an inserted photograph.

Not surprising, the district court found the '512 patent invalid for obviousness under 35 U.S.C. § 103. While not precisely replicated in a single prior patent, and hence not in violation of 35 U.S.C. § 102, the patent was clearly foreshadowed by the prior art, in particular by so-called platen pouches and by the Dunn patent. Platen pouches have been widely used for lamination. They consist of two conjoined, roughly congruent plastic sheets that are designed to receive a data card and are thereafter laminated by heat. While the platen pouch and related molding process are less sophisticated than the patented envelope and its related process, both envelopes involve a very similar basic concept. The Dunn patent disclosed a plastic envelope and taught, as the district court found, "the use of a hinge or coupling means along one of the four edges of an envelope against which an insert can be accurately aligned." Dunn also indicated, in its diagram, a congruent relationship between the outer sheets, as well as the ability of those sheets to be widely separated to receive an insert. For these and for other reasons developed in the opinion below, we agree with the district court that a person skilled in the relevant art would have had little difficulty in arriving at an envelope of this nature.[3]

[3] Avant urges us to recognize that the greatest inventions may be simple. We so concede, but this gets us nowhere: many nonpatentable devices are simple also.

Perhaps because it recognizes that if the '512 patent is taken at face value—as in essence the description of an envelope for lamination containing certain useful but not remarkable features—a finding of obviousness is unavoidable, Avant argues that the patent actually discloses an entire "method" of laminated card manufacture. Hence the cryptic mention of a "congruent" relationship is said to reveal a means to prevent "ooze of the adhesive from between the sheets of plastic and thus avoids the irregular edge distortion that invariably occurred in the prior art. . . ." We are told that since laminating techniques prior to use of this envelope involved pouches with excess material on the edges that had to be trimmed after molding, this patent teaches, in essence, a new process of lamination whereby a card is inserted in an already shaped envelope which requires no cutting of trimming afterwards.

But we cannot see that it was some novel teaching in the '512 patent that made it possible to trim first and mold later. Avant's own version of the inventive history leads to the opposite conclusion. If earlier laminating techniques resulted in ooze and wavy edges, it obviously made no sense to trim and finish the pouch prior to molding so long as the molding process itself was bound to distort the edges. But once the molding art improved so as to eliminate such problems, utilization of a pre-cut envelope such as the patent describes became a perfectly obvious possibility. Improvements in the molding art did occur. The platen press was replaced with the chip bonder, and envelopes can now be heated and bonded without distortion. These key developments may or may not have involved patentable invention, but once they took place invention was not required to finish off the pouch earlier rather than later.

Avant argues that by requiring "congruency" the patent did, in effect, teach an advance in molding technique and

hence reached the level of invention. Congruency is said to have produced a "surprising" result, in that the molten plastic did not ooze but, for reasons not fully understood, stayed put. Thus, although the patent says not a word to connect congruency with an improvement in the molding art, we are asked to find the word "congruent" the key to the invention—which is thus transformed into an invention of a heat-molding technique, rather than of simply a convenient laminating envelope.

There are two answers to this condition. First, while congruency of the two sheets may be one of the conditions necessary to mold even edges, it was not established that anyone would ever have thought otherwise. Envelopes and folders are quite often congruent. Second, the teaching of congruency, without more, does not disclose the "invention" of how to mold so as to avoid disfigured edges. Other matters—the right combination of heat, materials and machine--are clearly of equal or greater significance to achieve that result; and about such matters the patent teaches nothing. There was, indeed, evidence that the patented envelope will ooze, and did ooze, unless the correct combinations of heat and molding materials are used. While an inventor need not understand all the principles and benefits of his invention, he must make "such disclosure and description of his invention that it may be put into practice." *Diamond Rubber Co.* v. *Consol. Tire Co.*, 220 U.S. 428, 436 (1910); *Rosen* v. *Lawson-Hamphill, Inc.*, 549 F.2d 205, 211 n.5 (1st Cir. 1976). Even if we assume the '512 patent refers to a technique for heat-molding rather than simply an efficient envelope with certain useful features for the reception and alignment of a card, it does not adequately disclose and describe the invention.[4] Not only does the

[4] The district court's finding that the patent distinctly claimed and adequately described its subject matter, as required under 35 U.S.C. § 112, was grounded on what the court understood its

patent fail to reveal all the necessary steps, it does not even spell out the degree of congruency—the tolerances—required to achieve the effect now claimed. The conclusion is inescapable that the patent is only what it appears to be —a design for a particular kind of envelope to be used in the lamination process, and as such, void for obviousness.

Avant also relies on the "sign-posts" of commercial success and acceptance as establishing invention. However, Avant has not shown that the envelope described in the '512 patent was the key to the success and acceptance which the chip bonding lamination technique employed by Avant, and now by others, has enjoyed. Central to such success has been a bonding machine and molding process making it possible to utilize an envelope of the type set forth in the '512 patent in an efficient manner. Avant cannot bootstrap this success to the use of the envelope made out in the patent, any more than it can claim the chip bonding technique is covered by the patent itself. In the '512 patent we can find nothing more than an efficiently designed but unremarkable envelope which was not shown to have been, by itself, the linchpin of Avant's commercial success.

Avant complains that the district court erroneously excluded certain responses by Polaroid to requests for admission, but the record indicates that exclusion was due to Avant's procedural default and consequent waiver of its rights to have the admissions admitted into evidence.

We have carefully considered Avant's other arguments in its brief and reply brief, and find them to be without merit.

Affirmed.

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subject matter to be—essentially, the design of an efficient envelope, not a technique for heat molding resulting in undistorted edges and corners.

Adm. Office, U. S. Courts — Blanchard Press, Inc., Boston, Mass.

APPENDIX C

EXCERPTS FROM THE CONSTITUTION OF THE UNITED STATES OF AMERICA

ARTICLE I—Section 8—1. The Congress shall have power:

8. To promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries.

AMENDMENT V—No person shall be held to answer for a capital or other infamous crime unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service, in time of war or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use without just compensation.

APPENDIX D

EXCERPTS FROM TITLE 35, UNITED STATES CODE

§ 100. Definitions

When used in this title unless the context otherwise indicates—

(a) The term "invention" means invention or discovery.

(b) The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

(c) The terms "United States" and "this country" means the United States of America, its territories and possessions.

(d) The word "patentee" includes not only the patentee to whom the patent was issued but also the successors in title to the patentee.

§ 101. Inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

§ 102. Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other. (Amended July 28, 1972, Public Law 92–358, sec. 2, 86 Stat. 501.)

Note 1.—Section 3(b) of Public Law 92–358 provides that: "Section 2 of this Act [amends subsection (d) of this section] shall take effect six months from the date when Articles 1–12 of the Paris Convention of March 20, 1883, for the Protection of Industrial Property, as revised at Stockholm, July 14, 1967, come into force with respect to the United States and shall apply to applications thereafter filed in the United States." The cited articles entered into force for the United States on August 25, 1973. (See "United States Treaties and Other International Agreements" TIAS 7727.)

Note 2.—For amendment to paragraph (e) of this section relating to the Patent Cooperation Treaty (not yet in force) see text of Public Law 94–131, p. 108 *et seq.* of this pamphlet.

§ 103. Conditions for patentability; non-obvious subject matter

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

§ 112. Specification

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. A claim may be written in independent or dependent form, and if in dependent form, it shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. (Amended July 24, 1965, Public Law 89–83, sec. 9, 79 Stat. 261.)

Note.—For amendment of this section relating to the Patent Cooperation Treaty (not yet in force) see text of Public Law 94–131, p. 108 *et seq.* of this pamphlet.

APPENDIX E

FEDERAL RULES OF CIVIL PROCEDURE for the United States District Courts

Rule 1. Scope of Rules. These rules govern the procedure in the United States district courts in all suits of a civil nature whether cognizable as cases of law or in equity or in admiralty, with the exceptions stated in Rule 81. They shall be construed to secure the just, speedy, and inexpensive determination of every action.

Rule 61. Harmless Error. No error in either admission or the exclusion of evidence and no error or defect in any ruling or order or in anything done or omitted by the court or by any of the parties is ground for granting a new trial or for setting aside a verdict or for vacating, modifying, or otherwise disturbing a judgment or order, unless refusal to take such action appears to the court inconsistent with substantial justice. The court at every stage of the proceeding must disregard any error or defect in the proceeding which does not affect the substantial rights of the parties.

CERTIFICATE OF SERVICE

I, George E. Kersey, Attorney for Petitioner, certify that three copies of the above Petition for a Writ of Certiorari were served on the Respondent by mailing same first-class, postage prepaid, to Willkie Farr & Gallagher, Attorneys for Respondent, 1 Citicorp Center, 153 East 53 Street, New York, New York 10022.

George E. Kersey

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